

ABSTRACT OF THE DISCLOSURE

A sync generator (genlock) (10) for frequency and phase locking an incoming video signal to a system clock (12) includes a digitizer (16, 22) for digitizing the incoming video signal to yield a digitized color sub-carrier burst component. A numerically controlled oscillator (15) 5 clocked by the system clock generates a phase lock reference signal for locking to the incoming video signal. Phase detection means logic unit (42, 74) sense a static phase offset magnitude from an ideal 90° phase offset between the digitized color sub-carrier burst component and the numerically controlled oscillator output signal. In accordance with the sensed static offset, a static phase error nulling circuit (70) generates a compensating offset in accordance for input to 10 the system clock (27) to drive the static offset to zero, thus achieving frequency and phase locking. A color frame logic unit (78) determines the color frame sequence for the purpose of resetting the NCO and generating a color frame pulse marking the start of the period sequence.